



## Practice Test (5C: Aldehydes and ketones)



10 Questions



10 min

### Topics

ALDEHYDE AND KETONES, Preparation of Aldehyde and Ketone, Reactions of Aldehyde and Ketones, Base-catalysed Nucleophilic Addition Reactions with General Mechanism, Acid -catalysed Nucleophilic Addition Reactions with General Mechanism, Structure of Aldehydes and Ketones + Reduction & Oxidation

[Start Test](#)

09 : 58



1/10



10 min



Hint

Q : Ketones are prepared by the oxidation of:



Primary alcohols



Tertiary alcohols



Secondary alcohols



All of these

1

2

3

4

5

6

7

09 : 57



2/10



10 min



Hint

Q : The oxidation of primary alcohol gives



Alcohol



aldehyde



ketone



none of these

1

2

3

4

5

6

7

09 : 56



3/10



10 min



Hint

Q : Crotonaldehyde is an  $\alpha$ ,  $\beta$ -unsaturated aldehyde formed from an aldol. The aldehyde which is the starting material in this reaction is



Ethanal



Methanal



Propanal



Butanal

1

2

3

4

5

6

7



09 : 55



4/10



10 min



Hint

Q : An organic compound P when treated with  $\text{NaBH}_4$  forms Q, which is used in denaturing of the spirit. The compound P is



Ethanol



Methanal



Methanol



Ethanal

1

2

3

4

5

6

7

09 : 53



5/10



10 min



Hint

Q : Which one of the following does not give aldol condensation reaction?



Ethanal



Propanal



Propanone



Methanal

1

2

3

4

5

6

7

09 : 52



6/10



10 min



Hint

Q : Which of the following is NOT oxidized by mild oxidizing agents



HCHO



Glucose



CH<sub>3</sub>CHO



(CH<sub>3</sub>)<sub>2</sub>CO

1

2

3

4

5

6

7

09 : 50



7/10



10 min



Hint

Q : Methyl ketones are usually characterized by



Tollen's tests



Lucas test



Iodoform test



Fehling solution test

1

2

3

4

5

6

7



09 : 46



8/10



10 min



Hint

Q : An  $\alpha$ -Hydroxy acid with empirical formula  $\text{CH}_2\text{O}$  and molecular mass 90 has its IUPAC name



3-Hydroxy propanoic acid



Propanoic acid-2-ol



2-Hydroxy propanoic acid



2-Hydroxy propionic acid

4

5

6

7

8

9

10

09 : 45



9/10



10 min



Hint

Q : Formamints are used as throat lozenges, they contain



Ethanol + lactose



Formaldehyde + lactose



Formaldehyde + glucose



Acetaldehyde + lactose

4

5

6

7

8

9

10

09 : 44



10/10



10 min



Hint

Q : Fehling solution is



Sodium nitroprusside solution



Alkaline tartarate complex ion



Alkaline citrate complex ion



Ammonical silver nitrate solution

4

5

6

7

8

9

10





Correct



Unattempted



Incorrect



1/10

Q : Ketones are prepared by the oxidation of:



Primary alcohols



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All of these

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6

7





## Practice Test (5C: Aldehydes and ...



Correct



Unattempted



Incorrect



2/10

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Alcohol



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ketone



none of these

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Correct



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Methanal



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Butanal

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Unattempted



Incorrect



4/10

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Methanol



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7



 Correct


 Unattempted


 Incorrect


 7/10

Q : Methyl ketones are usually characterized by

 Tollen's tests

 Lucas test

 Iodoform test

 Fehling solution test

1

2

3

4

5

6

7



Correct



Unattempted



Incorrect



8/10

Q : An  $\alpha$ -Hydroxy acid with empirical formula  $\text{CH}_2\text{O}$  and molecular mass 90 has its IUPAC name



3-Hydroxy propanoic acid



Propanoic acid-2-ol



2-Hydroxy propanoic acid



2-Hydroxy propionic acid

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7

8

9

10





Correct



Unattempted



Incorrect



9/10

Q : Formamints are used as throat lozenges, they contain



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Formaldehyde + lactose



Formaldehyde + glucose



Acetaldehyde + lactose

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5

6

7

8

9

10





Correct



Unattempted



Incorrect



10/10

Q : Fehling solution is



Sodium nitroprusside solution



Alkaline tartarate complex ion



Alkaline citrate complex ion



Ammonical silver nitrate solution

4

5

6

7

8

9

10



## Test Level-1 (5C: Aldehydes and ketones)



20 Questions



20 min

### Topics

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[Start Test](#)

19 : 59



1/20



20 min



Hint

Q : Methyl ketones usually characterized by:



Tollen's tests



Lucas test



Iodoform test



Fehling solution test

1

2

3

4

5

6

7



19 : 56



2/20



20 min



Hint

Q : The oxidation of iso-propyl alcohol in the presence of acidify  $K_2Cr_2O_7$  gives



Propanal



Propanone



Propane



Butanone

1

2

3

4

5

6

7

19 : 55



3/20



20 min



Hint

Q : The catalyst used for the laboratory preparation of formaldehyde is



A Cd-asbestos



B Pb-asbestos



C Pt-asbestos



D Cu-asbestos

1

2

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7

19 : 53



4/20

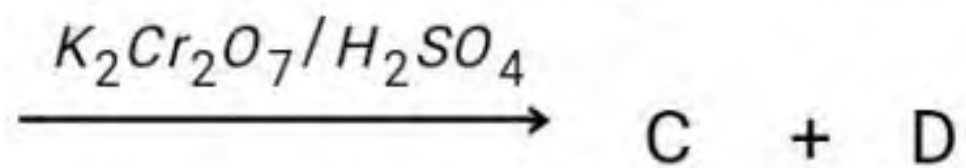


20 min



Hint

Q :  $\text{CH}_3 - \text{CO} - \text{CH}_2 - \text{CH}_3 + [\text{O}]$



In the given reaction, C and D are



$\text{CH}_3\text{COOH} + \text{CH}_3\text{COOH}$



$\text{CH}_3\text{COOH} + \text{CH}_3\text{CH}_2\text{CHO}$



$\text{CH}_3\text{COOH} + \text{CH}_3\text{CH}_2\text{COOH}$



$\text{HCOOH} + \text{CH}_3\text{COOH}$

1

2

3

4

5

6

7



19 : 52



5/20



20 min



Hint

Q :

Alcohols react with aldehydes in presence of dry HCl to give



Esters



Ethers



Acetals



Glyoxal



19 : 49



6/20



20 min



Hint

Q :

Cannizzaro's reaction is not given by



HCHO



$C_6H_5CHO$



$(CH_3)_3C-CHO$



$CH_3CHO$

1

2

3

4

5

6

7

19 : 48



7/20



20 min



Hint

Q : Acetaldehyde when treated with "HCN" and followed by acidic hydrolysis gives



Acetal



Lactic acid



Aldol



Cyanohydrin

1

2

3

4

5

6

7



19 : 46



8/20



20 min



Hint

Q : Aldehydes having  $\alpha$ -hydrogen atom combine with each other in the presence of dil. NaOH to form



Aldol



Enol



Ketol



Acetal

5

6

7

8

9

10

19 : 44



9/20



20 min



Hint

Q : Which of the following show no reactivity with hydrazine



HCHO



CH<sub>3</sub>OH



CH<sub>3</sub>CHO



(CH<sub>3</sub>)<sub>2</sub>CO

5

6

7

8

9

10

19 : 43



10/20



20 min



Hint

Q : 2-Pentanone and 3-Pentanone are usually characterized by



Tollen's tests



Lucas test



Iodoform test



Fehling solution test

5

6

7

8

9

10





11/20



20 min



Hint

Q : In an acid catalyzed reaction of carbonyl compounds, the acid increases\_\_\_\_\_



Nucleophilic character of C of carbonyl



Acidic character of carbonyl



Electrophilic character of C of carbonyl



Both acidic and nucleophilic character

7

8

9

10

11

12

13

19 : 39



12/20



20 min



Hint

Q : Cannizzaro's reaction takes place through the transfer of



Hydrogen ion



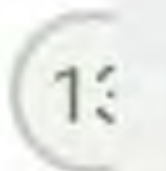
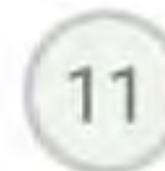
Hydride ion



Oxide ion



Methoxide ion



19 : 38



13/20



20 min



Hint

Q : When two moles of acetone are treated with a base the product is



A 4-hydroxy -4 methyl -2-pentanone



B 3-hydroxy butanone



C 3-hydroxy -2-methyl pentanone



D 3- hydroxyl pentanal

7

8

9

10

11

12

13



19 : 37



14/20



20 min



Hint

Q : Acetophenone is also called



Diphenyl ketone



Dimethyl ketone



Ethyl methyl ketone



Methyl phenyl ketone

10

11

12

13

14

15

19 : 36



15/20



20 min



Hint

Q : In aldol condensation reaction, the hydroxide ion acts as a



Base



Nucleophile



Electrophile



None of these

10

11

12

13

14

15

19 : 33



16/20



20 min



Hint

Q : When acetaldehyde reacts with hydrazine in presence of an acid the product formed is



Hydroxy acetaldehyde



Acetaldehyde hydrazone



Acetaldehyde oxime



Acetaldehyde phenyl hydrazone

12

13

14

15

16

17

18



19 : 32



17/20

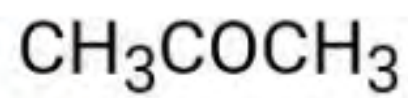
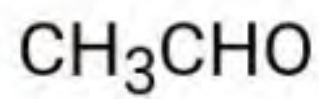
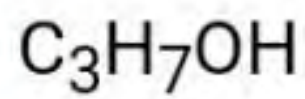
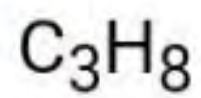


20 min



Hint

Q : Which one of the following is better reducing agent



12

13

14

15

16

17

18



18/20



20 min



Hint

Q : Propanal and propanone are reduced to -----with sodium borohydride.



1-Propanol and 1-propanol



1-Propanol and 2-Propanol



1-Propanol



2-Propanol

2

13

14

15

16

17

18

19 : 29



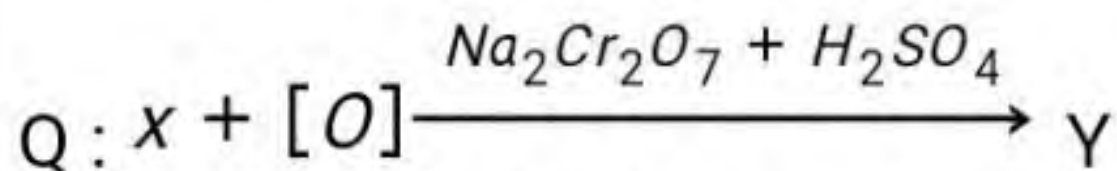
19/20



20 min



Hint



Y reacts with an other molecule of Y in the presence of dil. NaOH, Z is formed. If the compound Z is 3-Hydroxybutanal then what is X?



Ethanol



Ethanal



Propanol



Acetone

4

15

16

17

18

19

20



19 : 28



20/20



20 min



Hint

Q : Dry distillation of calcium acetate and calcium formate results in the formation of



Formaldehyde



Methyl ethyl ketone



Acetaldehyde



Acetone

4

15

16

17

18

19

20



Correct



Unattempted



Incorrect



1/20

Q : Methyl ketones usually characterized by:



Tollen's tests



Lucas test



Iodoform test



Fehling solution test

1

2

3

4

5

6

7



Correct



Unattempted



Incorrect



2/20

Q : The oxidation of iso-propyl alcohol in the presence of acidified  $K_2Cr_2O_7$  gives



Propanal



Propanone



Propane



Butanone

1

2

3

4

5

6

7





## Test Level-1 (5C: Aldehydes and k...



Correct



Unattempted



Incorrect



3/20

Q : The catalyst used for the laboratory preparation of formaldehyde is



A Cd-asbestos



B Pb-asbestos



C Pt-asbestos



D Cu-asbestos

1

2

3

4

5

6

7



Correct



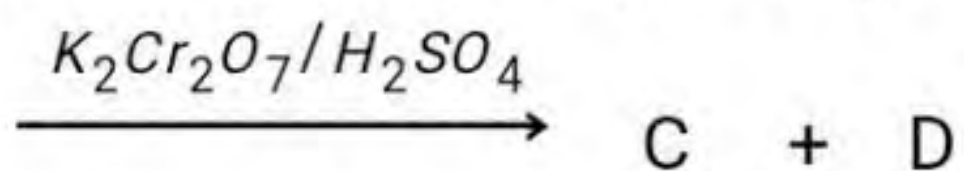
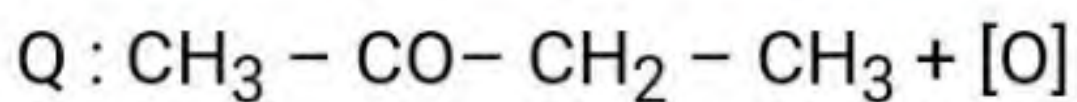
Unattempted



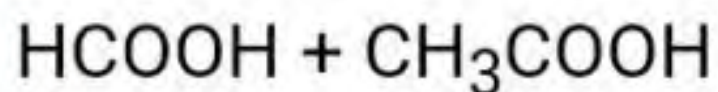
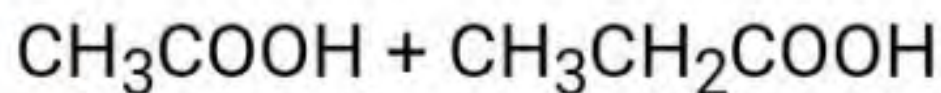
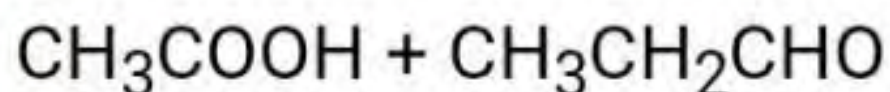
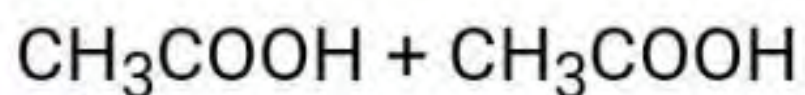
Incorrect



4/20



In the given reaction, C and D are



1

2

3

4

5

6

7



## Test Level-1 (5C: Aldehydes and k...



Correct



Unattempted



Incorrect



5/20

Q:

Alcohols react with aldehydes in presence of dry HCl to give



Esters



Ethers



Acetals



Glyoxal

1

2

3

4

5

6

7





Correct



Unattempted



Incorrect



6/20

Q:

Cannizzaro's reaction is not given by



HCHO



$C_6H_5CHO$



$(CH_3)_3C-CHO$



$CH_3CHO$

1

2

3

4

5

6

7



## Test Level-1 (5C: Aldehydes and k...



Correct



Unattempted



Incorrect



7/20

Q : Acetaldehyde when treated with "HCN" and followed by acidic hydrolysis gives



Acetal



Lactic acid



Aldol



Cyanohydrin

1

2

3

4

5

6

7



## Test Level-1 (5C: Aldehydes and k...



Correct



Unattempted



Incorrect



8/20

Q : Aldehydes having  $\alpha$ -hydrogen atom combine with each other in the presence of dil. NaOH to form



Aldol



Enol



Ketol



Acetal

3

4

5

6

7

8

9





Test Level-1 (5C: Aldehydes and k...



Correct



Unattempted



Incorrect



9/20

Q : Which of the following show no reactivity with hydrazine



HCHO



CH<sub>3</sub>OH



CH<sub>3</sub>CHO



(CH<sub>3</sub>)<sub>2</sub>CO

3

4

5

6

7

8

9



Correct



Unattempted



Incorrect



10/20

Q : 2-Pentanone and 3-Pentanone are usually characterized by



Tollen's tests



Lucas test



Iodoform test



Fehling solution test

6

7

8

9

10

11



Correct



Unattempted



Incorrect



11/20

Q : In an acid catalyzed reaction of carbonyl compounds, the acid increases\_\_\_\_\_



Nucleophilic character of C of carbonyl



Acidic character of carbonyl



Electrophilic character of C of carbonyl



Both acidic and nucleophilic character

6

7

8

9

10

11





## Test Level-1 (5C: Aldehydes and k...



Correct



Unattempted



Incorrect



12/20

Q : Cannizzaro's reaction takes place through the transfer of



Hydrogen ion



Hydride ion



Oxide ion



Methoxide ion

9

10

11

12

13

14

1



Correct



Unattempted



Incorrect



13/20

Q : When two moles of acetone are treated with a base the product is



A 4-hydroxy -4 methyl -2-pentanone



B 3-hydroxy butanone



C 3-hydroxy -2-methyl pentanone



D 3- hydroxyl pentanal

9

10

11

12

13

14

1



Correct



Unattempted



Incorrect



14/20

Q : Acetophenone is also called



Diphenyl ketone



Dimethyl ketone



Ethyl methyl ketone



Methyl phenyl ketone

9

10

11

12

13

14

1





## Test Level-1 (5C: Aldehydes and k...



Correct



Unattempted



Incorrect



15/20

Q : In aldol condensation reaction, the hydroxide ion acts as a



Base



Nucleophile



Electrophile



None of these

1

12

13

14

15

16

17



Correct



Unattempted



Incorrect



16/20

Q : When acetaldehyde reacts with hydrazine in presence of an acid the product formed is



Hydroxy acetaldehyde



Acetaldehyde hydrazone



Acetaldehyde oxime



Acetaldehyde phenyl hydrazone



Correct



Unattempted



Incorrect



17/20

Q : Which one of the following is better reducing agent



$C_3H_8$



$C_3H_7OH$



$CH_3CHO$



$CH_3COCH_3$





Correct



Unattempted



Incorrect



18/20

Q : Propanal and propanone are reduced to -----with sodium borohydride.



1-Propanol and 1-propanol



1-Propanol and 2-Propanol



1-Propanol



2-Propanol



Correct



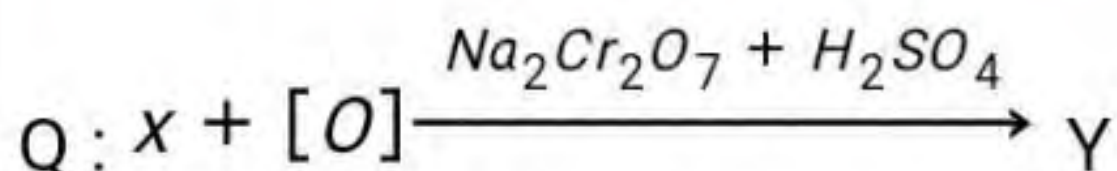
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Incorrect



19/20



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Ethanal



Propanol



Acetone

3

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17

18

19



Correct



Unattempted



Incorrect



20/20

Q : Dry distillation of calcium acetate and calcium formate results in the formation of



Formaldehyde



Methyl ethyl ketone



Acetaldehyde



Acetone





TEST

## Test Level-2 (Topic-5C)



30 Questions



30 min

### Topics

Base-catalysed Nucleophilic Addition  
Reactions with General Mechanism,  
Structure of Aldehydes and Ketones +  
Reduction & Oxidation, Identification of  
Carbonyl Compounds

**Start Test**

29 : 58



1/30



30 min



Hint

Q : Reduction of aldehydes by  $\text{NaBH}_4$  follows which mechanism



Nucleophilic substitution



Nucleophilic addition



Electrophilic addition



Free radical addition

1

2

3

4

5

6

7

29 : 57



2/30



30 min



Hint

Q :

Alcohols react with aldehydes in presence of dry HCl to give



Esters



Ethers



Acetals



Glyoxal

1

2

3

4

5

6

7



29 : 56



3/30



30 min



Hint

Q : Which compound gives positive silver mirror test



Propanone



Propanol



Propanal



Propanoic acid

1

2

3

4

5

6

7

29 : 54



4/30



30 min



Hint

Q : The reagent (s) used to distinguish between ethanal and formaldehyde



Phenylhydrazine



$\text{NaHSO}_3$



Alkaline aqueous iodine



Tollen's reagent

1

2

3

4

5

6

7

29 : 53



5/30



30 min



Hint

Q : The complex formed in Tollen's reagent is



[Ag (NH<sub>3</sub>)<sub>2</sub>]OH



[Ag (OH)<sub>2</sub>]NO<sub>3</sub>



[Ag (NH<sub>3</sub>)<sub>2</sub>]



[Ag (NH<sub>3</sub>)<sub>2</sub>]OH] NO<sub>3</sub>

1

2

3

4

5

6

7



29 : 52



6/30



30 min



Hint

Q : Aldehydes and ketones can be distinguished from each other by using all except



A Sodium nitroprusside test



B Fehling's solution



C Tollen's reagent



D Lucas test

1

2

3

4

5

6

7

29 : 51



7/30



30 min



Hint

Q : Which of the following reagents will react with both aldehydes and ketones



Hydrazine



Tollen's reagent



Fehling's reagent



Benedict's reagent

1

2

3

4

5

6

7

29 : 49



8/30



30 min



Hint

Q : Acetaldehyde when heated with Fehling's solution gives brick red precipitate of



Copper hydroxide



Cupric oxide



Cuprous oxide



Cuprous oxide and cupric oxide

5

6

7

8

9

10

11



29 : 48



9/30



30 min



Hint

Q : Which pair of compounds cannot be distinguished by means of Tollen's test



HCHO and  $\text{CH}_3\text{COCH}_3$



$\text{CH}_3\text{CHO}$  and  $\text{CH}_3\text{COCH}_3$



HCHO and  $\text{CH}_3\text{CHO}$



$\text{C}_6\text{H}_5\text{COCH}_3$  and  $\text{C}_6\text{H}_5\text{CHO}$

5

6

7

8

9

10

11

29 : 47



10/30



30 min



Hint

Q : One of the following is identification test of carbonyl compounds



Lucas test



2,4 - DNPH



Friedal - Craft Alkylation



Baeyer's reagent test

5

6

7

8

9

10

11

29 : 46



11/30



30 min



Hint

Q : The reagent that cannot be used to distinguish between propanone and propanal is



$I_2 / NaOH$



Sodium Nitroprusside



Benedict's reagent



2,4 - Dinitrophenylhydrazine

5

6

7

8

9

10

11



29 : 44



12/30



30 min



Hint

Q : Possible products by dry distillation of calcium formate and calcium acetate is



$\text{CH}_3\text{CHO}$



$\text{HCHO}$



$\text{CH}_3\text{HOCH}_3$



all

8

9

10

11

12

13

29 : 43



13/30



30 min



Hint

Q : HCHO and CH<sub>3</sub>CHO polymerizes in the presence of



H<sub>2</sub>SO<sub>4</sub>



HNO<sub>3</sub>



Dry HCl



NaBH<sub>4</sub>

8

9

10

11

12

13

29 : 41



14/30



30 min



Hint

Q : which of the following alcohol cannot be formed by reduction of aldehyde and ketone with  $\text{NaBH}_4$



1-Butanol



2-Butanol



2-methyl-1-butanol



2-methyl-2-butanol

10

11

12

13

14

15

1



29 : 40



15/30



30 min



Hint

Q : Hydrogen cyanide adds to aldehyde and ketones to form cyanohydrin the reaction is carried out by adding slowly a mineral acid to an aqueous solution of sodium cyanide. The acid generates HCN from sodium cyanide in situ which means



Before reaction



After reaction



During reaction



At any time

10

11

12

13

14

15

1

29 : 39



16/30



30 min



Hint

Q : Cannizzaro's reaction is not given by



HCHO



$C_6H_5CHO$



$(CH_3)_3C-CHO$



$CH_3CHO$

0

11

12

13

14

15

16

29 : 38



17/30



30 min



Hint

Q : Propanone reacts with HCN in basic medium followed by acid hydrolysis yielding



2-Hydroxy propanoic acid



2-Hydroxy-2-methyl propanoic acid



2-Hydroxy ethanoic acid



2-Hydroxy butanoic acid

13

14

15

16

17

18

19



29 : 36



18/30



30 min



Hint

Q : Crotonaldehyde is an  $\alpha$ ,  $\beta$ -unsaturated aldehyde formed from an aldol. The aldehyde which is the starting material in this reaction is



Ethanal



Propanone



Propanal



Propanol

13

14

15

16

17

18

19

29 : 34



19/30



30 min



Hint

Q : Sodium borohydride reduces the \_\_\_\_\_ bond



$C = C$



$C \equiv N$



$C \equiv C$



$C = O$

16

17

18

19

20

21

29 : 33



20/30



30 min



Hint

Q : Statement NOT true about reduction of acetone



With  $\text{NaBH}_4$  it follows nucleophilic addition



With  $\text{LiAlH}_4$  it gives propane



It gives to propanol with  $\text{NaBH}_4$



Can easily be reduced with  $\text{LiAlH}_4$

16

17

18

19

20

21



29 : 32



21/30



30 min



Hint

Q : The acid(s) produced by the oxidation of butanone is/are



Formic acid + propanoic acid



Formic acid + Acetic acid



Only propionic acid



Only acetic acid

16

17

18

19

20

21

29 : 30



22/30

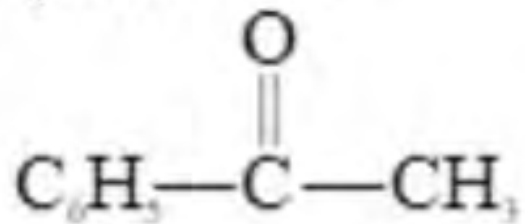


30 min



Hint

Q : The IUPAC name of the following given compound is



Phenyl Methyl Ketone



Acetophenone



Methyl Phenyl Ketone



Benzophenone

19

20

21

22

23

24

29 : 29



23/30

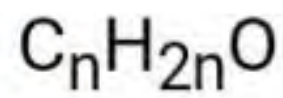
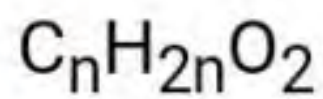
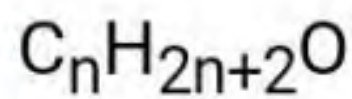
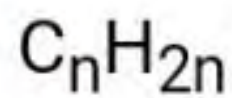


30 min



Hint

Q : Homologous series of both aldehyde and ketones have the general formula



19

20

21

22

23

24



29 : 28



24/30

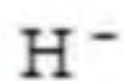
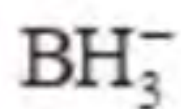
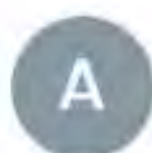


30 min



Hint

Q : The nucleophile produced during reduction of carbonyl compound with sodium borohydride is



19

20

21

22

23

24

29 : 26



25/30



30 min



Hint

Q : The structure and hybridization of carbonyl carbon in alkanal and alkanone is



Trigonal and  $sp^3$



Linear and  $sp^2$



Linear and  $sp^3$



Planar and  $sp^2$

22

23

24

25

26

27

28

29 : 25



26/30



30 min



Hint

Q : To produce butanone, which of the following should be reacted with  $\text{Na}_2\text{Cr}_2\text{O}_7(\text{aq})$ ,  $\text{H}_2\text{SO}_4(\text{aq})$



$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CHO}$



$(\text{CH}_3)_2\text{CHCHO}$



$\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CH}_3$



$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}_2\text{OH}$

22

23

24

25

26

27

28



29 : 23



28/30



30 min



Hint

Q : When aldehydes react with Tollen's reagent, which is true



An alcohol is produced



Silver ions are produced



Aldehyde reduces silver ions



A red precipitate forms

22

23

24

25

26

27

28

29 : 22



29/30



30 min



Hint

Q : During oxidation of secondary alcohols \_\_\_\_\_ is produced



Ketones



Aldehydes



Alkene



Amine

24

25

26

27

28

29

30

29 : 21



30/30



30 min



Hint

Q : Acetophenone cannot give



Iodoform



Cannizaro's reaction



Aldol Condensation



Sodium nitroprusside test

24

25

26

27

28

29

30





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



2/30

Q:

Alcohols react with aldehydes in presence of dry HCl to give



Esters



Ethers



Acetals



Glyoxal

1

2

3

4

5

6

7



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



3/30

Q : Which compound gives positive silver mirror test



Propanone



Propanol



Propanal



Propanoic acid

1

2

3

4

5

6

7



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



4/30

Q : The reagent (s) used to distinguish between ethanal and formaldehyde



Phenylhydrazine



$\text{NaHSO}_3$



Alkaline aqueous iodine



Tollen's reagent

1

2

3

4

5

6

7





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



5/30

Q : The complex formed in Tollen's reagent is



[Ag (NH<sub>3</sub>)<sub>2</sub>]OH



[Ag (OH)<sub>2</sub>]NO<sub>3</sub>



[Ag (NH<sub>3</sub>)<sub>2</sub>]



[Ag (NH<sub>3</sub>)<sub>2</sub>OH] NO<sub>3</sub>

1

2

3

4

5

6

7



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



6/30

Q : Aldehydes and ketones can be distinguished from each other by using all except



Sodium nitroprusside test



Fehling's solution



Tollen's reagent



Lucas test

1

2

3

4

5

6

7



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



7/30

Q : Which of the following reagents will react with both aldehydes and ketones



Hydrazine



Tollen's reagent



Fehling's reagent



Benedict's reagent

3

4

5

6

7

8

9





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



8/30

Q : Acetaldehyde when heated with Fehling's solution gives brick red precipitate of



A Copper hydroxide



B Cupric oxide



C Cuprous oxide



D Cuprous oxide and cupric oxide

3

4

5

6

7

8

9



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



9/30

Q : Which pair of compounds cannot be distinguished by means of Tollen's test



A  $\text{HCHO}$  and  $\text{CH}_3\text{COCH}_3$



B  $\text{CH}_3\text{CHO}$  and  $\text{CH}_3\text{COCH}_3$



C  $\text{HCHO}$  and  $\text{CH}_3\text{CHO}$



D  $\text{C}_6\text{H}_5\text{COCH}_3$  and  $\text{C}_6\text{H}_5\text{CHO}$

3

4

5

6

7

8

9



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



10/30

Q : One of the following is identification test of carbonyl compounds



Lucas test



2,4 - DNPH



Friedal - Craft Alkylation



Baeyer's reagent test

6

7

8

9

10

11





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



11/30

Q : The reagent that cannot be used to distinguish between propanone and propanal is



A  $I_2 / NaOH$



B Sodium Nitroprusside



C Benedict's reagent



D 2,4 - Dinitrophenylhydrazine

6

7

8

9

10

11



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



12/30

Q : Possible products by dry distillation of calcium formate and calcium acetate is



$\text{CH}_3\text{CHO}$



$\text{HCHO}$



$\text{CH}_3\text{HOCH}_3$



all

8

9

10

11

12

13

14



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



13/30

Q : HCHO and CH<sub>3</sub>CHO polymerizes in the presence of



H<sub>2</sub>SO<sub>4</sub>



HNO<sub>3</sub>



Dry HCl



NaBH<sub>4</sub>

8

9

10

11

12

13

14





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



14/30

Q : which of the following alcohol cannot be formed by reduction of aldehyde and ketone with  $\text{NaBH}_4$



1-Butanol



2-Butanol



2-methyl-1-butanol



2-methyl-2-butanol

8

9

10

11

12

13

14



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



15/30

Q : Hydrogen cyanide adds to aldehyde and ketones to form cyanohydrin the reaction is carried out by adding slowly a mineral acid to an aqueous solution of sodium cyanide. The acid generates HCN from sodium cyanide in situ which means



Before reaction



After reaction



During reaction



At any time

11

12

13

14

15

16

17



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



16/30

Q : Cannizzaro's reaction is not given by



HCHO



$C_6H_5CHO$



$(CH_3)_3C-CHO$



$CH_3CHO$

11

12

13

14

15

16

17





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



17/30

Q : Propanone reacts with HCN in basic medium followed by acid hydrolysis yielding



2-Hydroxy propanoic acid



2-Hydroxy-2-methyl propanoic acid



2-Hydroxy ethanoic acid



2-Hydroxy butanoic acid

1

12

13

14

15

16

17



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



18/30

Q : Crotonaldehyde is an  $\alpha$ ,  $\beta$ -unsaturated aldehyde formed from an aldol. The aldehyde which is the starting material in this reaction is



Ethanal



Propanone



Propanal



Propanol

14

15

16

17

18

19

20



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



19/30

Q : Sodium borohydride reduces the \_\_\_\_\_ bond



$C = C$



$C \equiv N$



$C \equiv C$



$C = O$

14

15

16

17

18

19

20





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



20/30

Q : Statement NOT true about reduction of acetone



With  $\text{NaBH}_4$  it follows nucleophilic addition



With  $\text{LiAlH}_4$  it gives propane



It gives to propanol with  $\text{NaBH}_4$



Can easily be reduced with  $\text{LiAlH}_4$

4

15

16

17

18

19

20



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



21/30

Q : The acid(s) produced by the oxidation of butanone is/are



A Formic acid + propanoic acid



B Formic acid + Acetic acid



C Only propionic acid



D Only acetic acid

17

18

19

20

21

22

23



## Test Level-2 (Topic-5C)



Correct



Unattempted

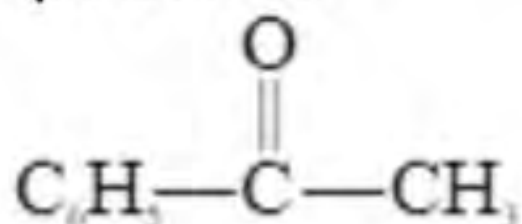


Incorrect



22/30

Q : The IUPAC name of the following given compound is



A

Phenyl Methyl Ketone

B

Acetophenone

C

Methyl Phenyl Ketone

D

Benzophenone

17

18

19

20

21

22

23





## Test Level-2 (Topic-5C)



Correct



Unattempted

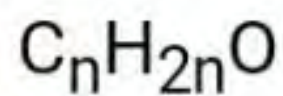
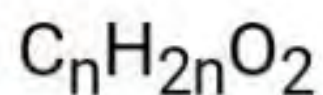
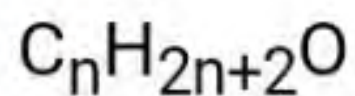
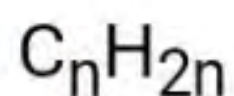


Incorrect



23/30

Q : Homologous series of both aldehyde and ketones have the general formula



7

18

19

20

21

22

23



## Test Level-2 (Topic-5C)



Correct



Unattempted

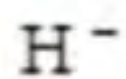


Incorrect



24/30

Q : The nucleophile produced during reduction of carbonyl compound with sodium borohydride is



20

21

22

23

24

25



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



25/30

Q : The structure and hybridization of carbonyl carbon in alkanal and alkanone is



Trigonal and  $sp^3$



Linear and  $sp^2$



Linear and  $sp^3$



Planar and  $sp^2$

20

21

22

23

24

25





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



26/30

Q : To produce butanone, which of the following should be reacted with  $\text{Na}_2\text{Cr}_2\text{O}_7(\text{aq})$ ,  $\text{H}_2\text{SO}_4(\text{aq})$



$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CHO}$



$(\text{CH}_3)_2\text{CHCHO}$



$\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CH}_3$



$\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}_2\text{OH}$

22

23

24

25

26

27

:



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



27/30

Q : Which of the following reactions is "NOT" given by formaldehyde



Reduction of Fehling's solution



Iodoform reaction



Urotropine formation



Polymer formation with phenol

22

23

24

25

26

27

:



## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



28/30

Q : When aldehydes react with Tollen's reagent, which is true



An alcohol is produced



Silver ions are produced



Aldehyde reduces silver ions



A red precipitate forms

24

25

26

27

28

29

30





## Test Level-2 (Topic-5C)



Correct



Unattempted



Incorrect



29/30

Q : During oxidation of secondary alcohols \_\_\_\_\_ is produced



Ketones



Aldehydes



Alkene



Amine

24

25

26

27

28

29

30



## Test Level-2 (Topic-5C)



Correct



Unattempted

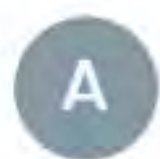


Incorrect



30/30

Q : Acetophenone cannot give



Iodoform



Cannizaro's reaction



Aldol Condensation



Sodium nitroprusside test

24

25

26

27

28

29

30